TSA SOFTWARE PTY LTD

Internet Access Client

User Document

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Date	19 October 2009
Status	Final
Version	2

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1 Introduction

Due to the recent introduction of an Internet Management System (IMS) at the University of Tasmania (UTAS), users are now required to authenticate prior to accessing the internet. Three methods of authentication are currently supported at UTAS, and include: wireless access (which requires no user intervention), access via a web page (which requests a user name and password), and access via the Internet Access Client (IA Client). The following documentation details authentication via the IA Client.

The IA Client is a small executable that runs at user log in and provides automatic authentication to the IMS (via the Active Directory (AD) credentials of the user). Utilising this application removes the need for users to enter their credentials at every log in, and reduces screen clutter as the browser does not need to remain open to provide the "keep-alive-pop-up" which maintains an active connection to the IMS.

2 Platforms

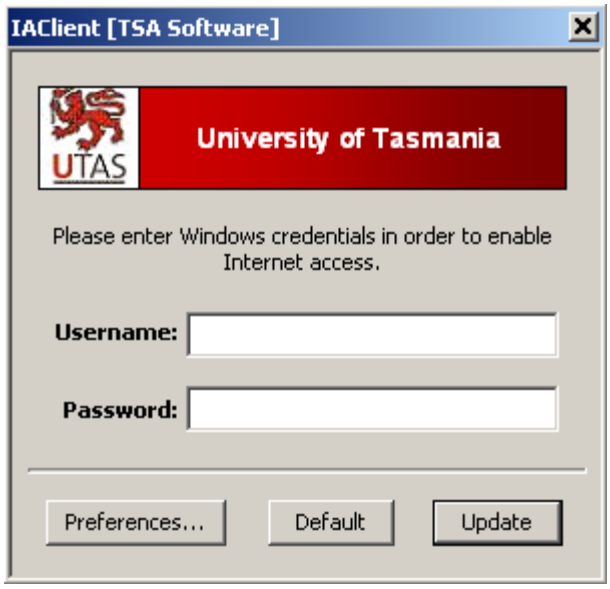
The Internet Authentication Client (IA Client) is currently supported under the following platforms: Windows, Mac and Linux.

2.1 Windows

The Windows platform allows the IA Client to operate transparently (ie. no user interface). In most cases the IA Client will automatically authenticate using the currently logged in user's credentials.

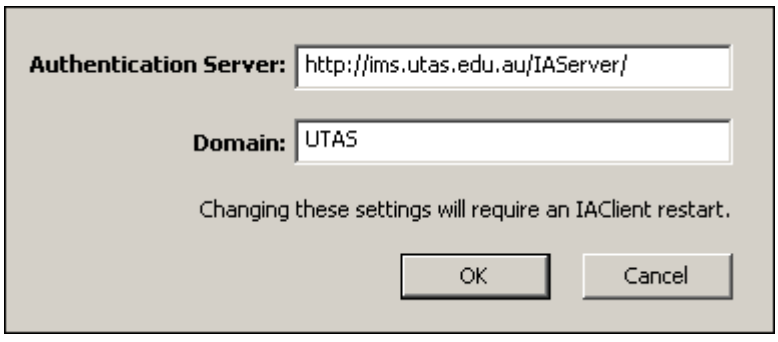
When the currently logged in user's credentials do not match with against the UTas AD, a basic user interface appears to allow the user to specify a valid credential set. The IA Client displays the Shell automatically upon authentication failure, or can alternatively be viewed under user control via the 'IA Client Shell' shortcut located in the Start menu under 'Programs→IA Client'.

Note: If the user chooses to initiate changes, the IA Client must then be restarted via the 'IA Client' shortcut to allow changes to take effect.



The above diagram shows the main dialog within the Shell. The purpose of each element is as follows:

- Username – valid username within AD, typically the user's network logon username.
- Password – password associated with AD username.
- Preferences – displays the preferences dialog box as shown below.
- Default – resets the username/password to that of the currently logged in user.
- Update – updates the username/password within the IA Client.



The above diagram shows the 'Preferences' dialog within the Shell. All elements on this page are normally set during install time, and should very rarely need to be modified. The purpose of each element is as follows:

- Authentication Server – URL path to the IA Server page against which the IA Client will authenticate.
- Domain – Active Directory domain to authenticate against (i.e. where the username/password combination is stored).

The IA Client is distributed as an MSI which can be locally installed by a user or by an administrator over the network. It performs a per-machine installation which does require

some elevated privileges in order to write to the registry as well as the 'Program Files' directory. The MSI displays a typical installation wizard when run by the user. In nearly all cases the user can accept the defaults and continue. Once installation is complete, the IA Client will appear in 'Add or Remove Programs' under 'Control Panel' where it can subsequently be uninstalled if desired. The MSI automatically performs all actions necessary to configure the IA Client and enable auto-start. There is nothing more that the user needs to do to gain access to the Internet.

2.2 Mac

The Mac variant looks and behaves similarly to the Windows one. Again, the IA Client is designed to prompt the user for credentials via the Shell when required. The Shell is designed to appear as an application in the Dock and can also be started under user control.

The main difference in the Shell interface between Windows and the Mac is that the 'Preferences' dialog is activated via the menu rather than directly off the main dialog. An 'About' dialog is also available from the menu.

The IA Client is distributed as a compressed disk image. When the user opens the image, they are presented with the following: a folder containing the IA Client, the Shell, an Applications shortcut and a script to add the IA Client to their login items so it automatically starts on login. The IA Client and Shell are application bundles that behave like folders, and can be moved anywhere on the user's machine just by dragging. There are no external dependencies, however typically both should be located in the Applications folder.

2.3 Linux

Two Shell programs are available under Linux. The first is command-line based (*IAClientCmd*) for use by users when a window manager is not installed or if remote access is required. For first time installation this tool should be run from the command line to capture the user's credentials after this the IA Client can be run from login scripts. It is the user's responsibility to configure the system before use. The second is GUI based (*IAClientGtk*), leveraging the gtk library, which looks and behaves similarly to the Shell of the other two platforms.

The IA Client is distributed as a single folder in a compressed archive format containing all necessary executables and configuration files. This folder is completely self-contained and can be placed anywhere on the user's machine although typically in either */usr/local* or */opt*.

3 FAQ

3.1 Windows

3.1.1 What are the minimum machine capabilities required to run the IA Client?

Special attention was placed on making the IA Client as compatible with as many machines as possible. It has a negligible disk and memory footprint and should run on all machines from Windows 2000 onwards.

3.1.2 How can I check if the IA Client is installed?

XP or earlier: Go to 'Control Panel' and select 'Add or Remove Programs'. If installed, an IA Client entry will exist in the programs list of the 'Change or Remove Programs' tab.

Vista or later: Go to the 'Control Panel' and select 'Programs and Features'. If installed, an IA Client entry will exist in the programs list.

3.1.3 How can I determine if the IA Client is running?

Open 'Task Manager' and select the 'Processes' tab. If running, an IAClient.exe entry will appear in the list.

3.1.4 How can I determine which version of IA Client is installed?

XP or earlier: Navigate to the IA Client entry in the 'Add or Remove Programs' as per question 3.1.2. An option to 'Click here for support information' will appear, and should be selected. The version is then displayed in the 'Support Info' dialog.

Vista or later: Navigate to the IA Client entry in the 'Programs and Features' as per question 3.1.2. A column to the right of the name in the programs list will show the version.

3.1.5 I cannot access the Internet, or am being redirected to the web authentication page.

By default, the IA Client attempts to use the credentials of the currently logged in user, unless overridden by the Shell. These credentials must match a valid Active Directory entry for authentication to be successful.

If a user's credentials have been overridden, the correct domain can be verified via the 'Preferences' dialog in the Shell.

A user can determine if the authentication server is available, and if it was correctly specified during installation via the 'Preferences' dialogue in the Shell.

The IA Client uses a one-way best attempt protocol when sending heartbeats to the server. If the messages cannot get through to the server for more than 15 minutes the Internet Access System eventually times out the session. In this instance restart the IA Client as described below.

If all else fails, the user can simply restart the IA Client by clicking the shortcut in 'Programs→IAClient' on the Start menu. This will automatically terminate any existing IA Clients and start a fresh session.

3.1.6 My machine has just woken-up, or the IP address has just changed, and I am being redirected to the web authentication page.

It takes the IA Client a finite amount of time to detect these events, and therefore requires re-authentication with the Internet Access System. Generally for a wake-up this time is less than 10 seconds and for an IP address change around 30 seconds. If you try to hit a web page within these times re-authentication may not yet have completed so the fallback of web authentication is enacted. Just wait a little longer then refresh the URL and everything should work fine.

3.1.7 Why has the Shell suddenly appeared?

This indicates that the current credentials are invalid according to the Internet Access System, so it is now requesting a new set of credentials.

3.1.8 I started entering my credentials in the Shell. I now want to exit the Shell without saving my credentials. How do I proceed?

Click the close button (represented by 'X') in the top right corner of the dialog.

3.1.9 Is the IA Client supported within a Virtual Machine (VM) environment?

Yes. The IA Client can be used on a Windows OS running directly on hardware, or indirectly through a VM.

3.1.10 I am having trouble installing the IA Client via the MSI.

The MSI does a per-machine install which requires elevated privileges. Therefore it is strongly recommended that all installs occur using an Administrator account. Under Vista and Windows 7, the user will need to have User Account Control (UAC) enabled if installing as a standard user (to allow for the request of elevated privileges to succeed).

3.1.11 I see an 'IA Client Files In Use' dialog during installation. What does this mean?

Under Vista or Windows 7, an 'IA Client Files In Use' dialog may appear due to the fact that an older IA Client executable may already be running in the background. The MSI is designed to handle this, so just click 'Continue'.

3.1.12 What is the recommended method for uninstalling the IA Client?

XP or earlier: Navigate to the IA Client entry via 'Control Panel' and select 'Add or Remove Programs', then click on the 'Change' button. A dialog should appear giving the option to repair or remove. Select 'remove', then click 'Finish'.

Vista or later: Navigate to the IA Client entry via the 'Control Panel' and select 'Programs and Features', and then 'Change'. A dialog should appear giving the option to repair or remove. Select remove then click 'Finish'.

No 'Change' option indicates that the IA Client is not actually installed but rather being advertised across the network. Once a shortcut is clicked, installation will occur automatically.

Although a remove option is available directly from the 'Control Panel' when clicking on the IA Client entry, this is not the recommended method to uninstall as it still leaves links if the IA Client is being advertised. This may cause trouble when installing the next version.

3.1.13 Is fast user switching supported?

No. The OS does not provide any indication when fast user switching is taking place, and so the IA Client is unable to re-authenticate in this case.

3.2 Mac

3.2.1 What are the minimum machine capabilities required to run the IA Client?

The IA Client is designed to run on any version of Mac OS X including both Intel and PowerPC based architectures.

3.2.2 How can I check if the IA Client is installed?

The IA Client is a self-contained bundle which can be placed anywhere. However, in nearly all cases it should be in 'Applications' which can be examined by opening 'Finder'. If not there a search can be performed in 'Finder' to see if it exists elsewhere.

A link should also exist in the login items list for the user.

3.2.3 How can I determine if the IAClient is running?

Open a 'Terminal' window and type 'ps ax'. An IA Client entry should appear in the process list if it is running. The IA Client is deliberately designed to be non-intrusive and run in the background, hence why it does not appear in the Dock.

3.2.4 How can I determine which version of IA Client is installed?

Start the Shell then from the menu choose 'IAClient→About IAClient'. A version dialog will appear.

3.2.5 I cannot access the Internet, or am being redirected to the web authentication page.

Refer to the answer of question of 3.1.5 of the Windows section as the behaviour is similar. The main difference relates to how the dialogs are accessed; under the Mac variant they are opened from the Shell via the menu.

Check that the IA Client has been added to the login items list for the user via 'System Preferences→Accounts→Login Items' so it is automatically started.

If all else fails the user can simply restart the IA Client by double-clicking the IA Client icon in the installed directory. This will automatically terminate any existing IA Clients and start a fresh session.

3.2.6 My machine has just woken-up, or the IP address has just changed, and I am being redirected to the web authentication page?

It takes the IA Client a finite amount of time to detect these events, and therefore requires re-authentication with the Internet Access System. Generally for a wake-up, this time is less than 10 seconds, and for an IP address change, around 30 seconds. If you try to hit a web page within these times, re-authentication may not yet have completed so the fallback of web authentication is enacted. Just wait a little longer then refresh the URL and everything should work fine.

3.2.7 How do I start the Shell, and why doesn't the main dialog appear?

Double-click the IA Client Shell icon in the installed directory. If the main dialog does not appear it can be opened from the menu by choosing 'IAClient→Update Credentials'.

3.2.8 Is fast user switching supported?

No. The OS does not provide any indication when fast user switching is taking place, and so the IA Client is unable to re-authenticate in this case.

3.3 Linux

3.3.1 What are the minimum machine capabilities required to run the IAClient?

The IA Client is designed to run on various Linux flavours but has been extensively tested on Ubuntu and Fedora. For Kerberos support, the 'krb5' and 'gssapi' libraries (major version 2) must be installed and also configured for the user. If not available, the IA Client will continue to function, but only the NTLM protocol will be available for authentication.

The IA Client will run either with or without a window manager. If using the GUI based Shell (*IAClientGtk)* then the 'gtk' library (major version 2) must be installed.

3.3.2 How can I check if the IA Client is installed?

The IA Client is a self-contained folder which can be placed anywhere. However, it is normally located in */usr/local* or */opt*. If not there, a search can be performed using the 'find / -name IAClient*' command within a 'Terminal' window.

A link should also exist in the 'Startup Applications' for the user.

3.3.3 How can I determine if the IA Client is running?

Open a 'Terminal' window and type 'ps ax'. An IA Client entry should appear in the process list if it is running.

3.3.4 I cannot access the Internet, or am being redirected to the web authentication page.

Refer to the answer of question 3.1.5 of the Windows section as the behaviour is similar.

If using a window manager then check that the IA Client has been added to the startup list for the user via 'System→Preferences→Startup Applications' so it is automatically started. If not using a window manager then an entry to the IA Client should exist in one of the startup scripts like '.profile'.

If all else fails the user can simply restart the IA Client by double-clicking the IAClient icon in the installed directory. This will automatically terminate any existing IA Clients and start a fresh session.

3.3.5 My machine has just woken-up or the IP address has just changed and I am being redirected to the web authentication page?

It takes the IA Client a finite amount of time to detect these events and therefore requires re-authentication with the Internet Access System. Generally for a wake-up this time is less than 10 seconds and for an IP address change around 30 seconds. If you try to hit a web page within these times re-authentication may not yet have completed so the fallback of web authentication is enacted. Just wait a little longer then refresh the URL and everything should work fine.

3.3.6 How do I start the Shell?

Double-click the IAClientGtk icon in the installed directory.

3.3.7 Is fast user switching supported?

No. The OS does not provide any indication when fast user switching is taking place, and so the IA Client is unable to re-authenticate in this case.